

DESCRIPTION

Source Human embryonic kidney cell, HEK293-derived human Chromogranin A protein
Leu19-Gly457, with a C-terminal 6-His tag
Accession # P10645.7

N-terminal Sequence Analysis Leu19

Predicted Molecular Mass 50 kDa

SPECIFICATIONS

SDS-PAGE 60-80 kDa, under reducing conditions

Activity Measured by its binding ability in a functional ELISA.
Recombinant Human SCG3 His-tag (Catalog # 10374-SC) is immobilized at 1 µg/mL (100 µL/well), Recombinant Human Chromogranin A His-tag (Catalog # 10422-CH) binds with an ED₅₀ of 40-360 ng/mL.

Endotoxin Level <0.10 EU per 1 µg of the protein by the LAL method.

Purity >90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

Formulation Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 200 µg/mL in PBS.

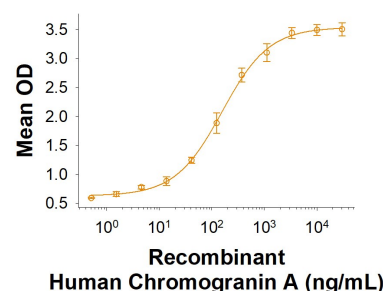
Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

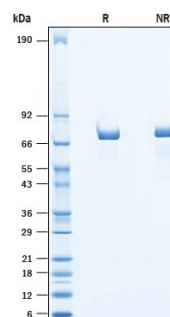
DATA

Binding Activity



When Recombinant Human SCG3 His-tag (Catalog # 10374-SC) is immobilized at 1 µg/mL (100 µL/well), Recombinant Human Chromogranin A His-tag (Catalog # 10422-CH) binds with an ED₅₀ of 40-360 ng/mL.

SDS-PAGE



2 µg/lane of Recombinant Human Chromogranin A His-tag Protein (Catalog # 10422-CH) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 60-80 kDa.

BACKGROUND

Chromogranin A (CgA), also known as pituitary secretory protein I (SP-I), is a member of the granin family of regulated secretory proteins. CgA shares several protein characteristics common to the granin family: acidic isoelectric point, the capacity to bind calcium ions, the ability to form aggregates and multiple dibasic cleavage sites. Mature human CgA is 439 amino acids (aa) and contains 10 dibasic, proteolytic cleavage sites, capable of yielding several smaller peptides, each displaying a unique function (4). Mature human CgA shares 63% aa sequence identity with mouse and rat CgA. CgA is expressed exclusively in the secretory dense core granules of most normal and neoplastic neuroendocrine cells (1-3). Increased levels of CgA have been detected in patients with neuroendocrine tumors as well as non-neuroendocrine tumors, hence CgA is an important serological marker for tumor diagnosis and monitoring tumor progression/regression (5, 6). It has been demonstrated in mouse model that full-length CgA containing its C-terminal region can impair angiogenesis and tumor growth (5). In addition, CgA can bind to Secretogranin III to regulate the biogenesis of secretory granules (7).

References:

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3. Modlin, I.M. *et al.* (2010) *Am. Surg. Oncol.* **17**:2427.
4. Marotta, V. *et al.* (2018) *Endocr Relat Cancer* **25**:R11.
5. Curnis, F. *et al.* (2016) *Oncotarget* **7**:72716.
6. Gkolfinopoulos, S. *et al.* (2017) *World J. Methodol.* **7**:9.
7. Hosaka, M. *et al.* (2004) *J Biol Chem* **279**:3627.